

552, 679

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 October 2004 (21.10.2004)

PCT

(10) International Publication Number
WO 2004/090382 A1

(51) International Patent Classification⁷: **F16H 15/38**

(21) International Application Number:
PCT/GB2004/001556

(22) International Filing Date: 8 April 2004 (08.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0308214.6 9 April 2003 (09.04.2003) GB

(71) Applicant (for all designated States except US): **TORO-
TRAK (DEVELOPMENT) LTD.** [GB/GB]; 1 Aston
Way, Leyland, Lancashire PR5 3UX (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DUTSON, Brian,
Joseph** [GB/GB]; 6 Berryfold Way, Astley, Tyldes-
ley, Manchester M29 7PT (GB). **ROBINSON, Leslie,
Kendrick** [GB/GB]; 31 Cedarwood Drive, Leyland,
Preston PR25 1HN (GB).

(74) Agent: **W.P. THOMPSON & CO.**; Coopers Building,
Church Street, Liverpool L1 3AB (GB).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

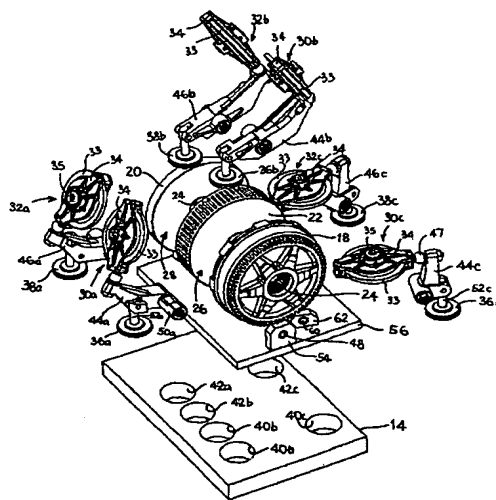
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- with amended claims

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: TRANSMISSION OF THE TOROIDAL RACE ROLLING TRACTION TYPE



(57) Abstract: A variator of the toroidal race rolling traction type has a rotatably mounted input disc (18, 20) an output disc (22) rotatably mounted coaxially with the input disc (18, 20), a plurality of rollers (30, 32) transmitting rotation between the input disc and the output disc and a plurality of double-acting pistons (36, 38) each acting upon a respective one of the rollers. The variator also has a plurality of levers (44, 60) each connected to a respective one of the rollers (30, 32) and its associated actuator (36, 38). By connecting the actuators to the rollers via levers a much more compact arrangement can be achieved.

WO 2004/090382 A1